

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 3, line 2, and ending at line 17 with the following amended paragraph:

In such sheet discharging apparatus, when the sheet is discharged at a high speed to the endless belt by the discharging means, the rear edge of the sheet is nipped by a roller pair for conveying the sheet in the plural rows, and there is a difference between the conveying speed of the roller pair and the discharging speed of the discharging means. Accordingly, in order to discharge at high speed to the endless belt, it is necessary to eliminate ~~for~~ the difference. In the above publications No. 3286598 and 2812143, the sheet discharging apparatus is provided with a one-way clutch between a conveyer roller of the roller pair disposed along the plural rows and a shaft for coaxially supporting the conveyer rollers. When the discharging at the high speed to the endless belt is performed, the one-way clutch ~~effects~~ operates to release the conveyer roller from the driving system. Thus the conveyer roller freely rotates such that the sheet may smoothly leave the roller pair.

Please replace the paragraph beginning at page 3, line 18, and ending at line 31 with the following amended paragraph:

However, in order to eliminate ~~for~~ the difference between the conveying speed of the conveying roller and the discharging speed by the discharging means in this structure of free rotation of the conveying roller ~~in~~by the effect of the one-way clutch, ~~the~~ a large number of the one-way ~~clutch~~ clutches is provided in accordance with the length variation of the cut sheet to be

used in the above sheet discharging apparatus. As the one-way clutch is expensive, ~~the a~~ low cost for production is difficult. Further, as the one-way clutch is attached to one roller of the conveyer roller pair, the roller nip force of the ~~another other~~ roller of the conveyer roller pair is applied as ~~the a~~ bending moment and ~~the an~~ excess radial load to the one-way clutch and the conveyer roller, and therefore breaks the one-way clutch. Therefore, the durability of such a clutch is not so high.

Please replace the paragraph beginning at page 4, line 1, and ending at line 23 with the following amended paragraph:

In the publication No. 2765652, a torque limiter is provided between a drive shaft and a drive roller of a high speed discharging means. The torque limiter ~~has effects operates~~ to freely rotate the drive roller, when a torque applied to the drive roller is at least a predetermined value. Thus the difference between the conveying speed of the conveyer roller and the discharging speed of the drive roller of the discharging means is eliminated. The drive roller is supported by a frame attached to the drive shaft. There is also a gear drive transmission mechanism between the drive roller and the drive shaft. Thus the drive force of the drive shaft is transmitted through the gear drive transmission mechanism and the torque limiter to the drive roller. Accordingly, the structure around the drive roller is complicated, the cost is high, and it is hard to keep the area for deposition of the parts. Further, the torque limiter is the so-called ~~magnet magnetic~~ particle type, and therefore expensive, which make the cost higher. Furthermore, in the publication No. No. 60-23343, a clutch mechanism which is constructed of a solenoid and a pair of clutch plates is used

instead of the one-way clutch and the torque limiter. In this case, however, the number of the parts becomes larger, and many controlling means are necessary, which prevents the decrease of the cost.

Please replace the paragraph beginning at page 5, line 3, and ending at line 18 with the following amended paragraph:

In order to achieve the object and the other object, a sheet discharging apparatus of the present invention has a conveying means for conveying a sheet on a conveying path and a high speed discharging means for discharging out the sheet at high speed. The high speed discharging means is positioned near the exit, and a discharging speed is higher than a conveying speed of the conveying means. The high speed discharging means comprises a drive roller, a nip roller and a frictional connection unit. The drive roller is rotatably and coaxially attached to a drive shaft, and is unshiftable in an axial direction of the drive shaft. The nip roller contacts to the drive roller, and rotates in accordance with rotation of the drive roller to nip the sheet with the drive roller. The frictional connection unit has ~~a—the function of a~~ friction clutch, and firmly ~~combines couples~~ the drive roller and the drive shaft ~~with by~~ friction.

Please replace the paragraph bridging pages 5 and 6 with the following amended paragraph:

In a ~~preferable—preferred~~ embodiment of the present invention, the friction member is provided with a contact portion for contacting the drive roller. The contact portion is chamfered to have ~~an arc-shape or a linear inclination or are shape~~ to an axial direction of the drive roller.

The sheet is conveyed on said path in a situation that the sheets are positioned in zigzag in plural rows, and sequentially arranged in a single row after discharged by the discharging apparatus.

Please replace the paragraph beginning at page 8, line 14, and ending at line 17 with the following amended paragraph:

As shown in ~~FIGs.~~FIGs. 2A-2C, the sheet dispenser 10 dispenses the sheets 15-17 into one or plural ~~row-rows~~ in accordance with the sheet size. In this situation, each sheet 15-17 is sent to the development device 18 and the dryer 19.

Please replace the paragraph beginning at page 9, line 4, and ending at line 6 with the following amended paragraph:

As shown in FIG. 2C, the large size sheet 17 is not dispensed but deposited and conveyed in one row ~~on-all~~ over the first-third conveying paths 21-23.

Please replace the paragraph beginning at page 12, line 15, and ending at line 23 with the following amended paragraph:

The high speed discharging roller pair 50 disposed near the exit 47 of the primary path 44 is constructed of a drive roller 63 and a nip roller 64. As shown in FIG. 5, the plural drive rollers 63 are rotatably and coaxially attached to a metallic shaft 65 with the same intervals between the neighboring drive rollers 63. It is to be noted in this figure that the number of the drive rollers 63 on the shaft 65 is six. There is a frictional connection unit (friction clutch) 66 between ~~the each~~ drive roller 63 and the shaft 65.

Please replace the paragraph beginning at page 13, line 13, and ending at line 20 with the following amended paragraph:

The drive roller 63 is a roller produced from synthesized polymer, and the surface of the drive roller 63 is coated with a rubber coating 72. As the synthesized polymer, there are materials which ~~is-are~~ excellent in slip properties, abrasion resistance. Such materials are, for example, polyacetal (POM), polyamide (PA), ultra-high-molecular polyethylene (PE-UHMW), polyethylene sulfide (PPS), polytetrafluoroethylene (PTFE) and the like.

Please replace the paragraph bridging pages 13 and 14 with the following amended paragraph:

The friction member 74 is nearly-cylindrically shaped, and coaxially attached to the shaft 65 so as to be slidable in the axial direction. The friction member or pad 74 has a compression contact surface 74a which contacts ~~to~~ the side surface 63b of the drive roller 63. In the middle of the contact surface 74a, a notch 74b is formed. Further, in an opposite side to the contact surface 74a, the friction member 74 has a recess 74c continuing to a through hole 74e through which the shaft 65 is inserted. Note that the friction member 74 is formed from the same synthesized polymer as the drive roller 63. The notch 74b is formed so as to have ~~the-a~~ diameter for fitting to the E-ring 71b.

Please replace the paragraph beginning at page 14, line 22, and ending at line 27 with the following amended paragraph:

When a force of more than a predetermined value is applied to the drive roller to rotate in a direction B (see, FIG.7), there occurs a slide-slippage between the drive roller 63 and the friction member 74 against the bias of the coil spring 75. Accordingly, the drive roller 63 rotates at ~~the~~a smaller rotational speed than the shaft 65.

Please replace the paragraph bridging pages 20 and 21 with the following amended paragraph:

As shown in FIG. 8A, the sheet 16 is conveyed with the conveying roller pair 49 at the conveying speed V_A in accordance with the rotation of the conveying roller pair 49. In the high speed discharging roller pair 50, it is to be noted that the shaft 65 and the drive roller 63 are firmly combined with coupled by friction by via the frictional connection unit 66, so as to rotate together. The discharging speed of the high speed discharging roller pair 50 is $V_B (>V_A)$. The sheet 16 conveyed to the high speed discharging roller pair 50 is nipped with the drive roller 63 and the nip roller 64. As shown in FIG. 8B, a front edge 16a of the sheet 16 is nipped with the high speed discharging roller pair 50. Thereby as a rear edge 16b of the conveying roller pair 49 sheet 16 is nipped, the sheet 16 is tensed toward the rear edge 16b at a tension force which is larger than ~~the~~a predetermined value. Accordingly, the tension force is transmitted to the drive roller 63 so as to rotate in the direction opposite to the rotational direction. Thus the drive roller

63 slips on the frictional connection unit 66. Accordingly, the drive roller 63 rotates at the lower rotational speed V_B' than the rotational speed V_B , ($V_B' < V_B$), and the difference between the conveying speed of the conveying roller pair 49 and the discharging speed of the high speed discharging roller pair 50 is eliminated to discharge the sheet 16 sequentially.

Please replace the paragraph beginning at page 22, line 5, and ending at line 31 with the following amended paragraph:

Further, the frictional connection unit 66 is provided coaxially with the drive roller 63 and the shaft 65, and has a simple structure for transmitting the drive force. The number of parts of the frictional connection unit 66 is small, and therefore the cost for producing the frictional connection unit 66 is low. Furthermore, the drive roller 63 and the friction member 74 are formed of the synthetic polymer, polymers, and the load by the slips slippage between the two members can be easily calculated from the biasing force, applied by the biasing means applied with a biasing member, and the frictional coefficient coefficients of the both synthetic polymerpolymers. Further, while the bias pressure is calculated from the contact area of the synthetic polymer and the biasing force applied by the biasing member, the upper limit of abrasion in slip can be estimated from the multiple (PV value) of the averaged speed and the bias pressure. Thus when the a predetermined load is applied, the frictional connection unit 66 is effective to discharge the sheet sequentially. If the a torque limiter of the magnetic sand type is used instead of the frictional connection unit 66, then the cost for production becomes higher. Further, the torque limiter slips when the sheet is discharged. In this case, the high endurance is

necessary. Furthermore, when the endurance is near the limit thereof, the load of the slip varies so much. Therefore the sheet 16 cannot be discharged sequentially. Further, since there is a difference ~~of-in~~ ~~limits~~ of the endurance between ~~products-components~~ of the torque limiter, it becomes extremely difficult to maintain the stability of the discharging.

Please replace the paragraph beginning at page 23, line 6, and ending at line 28 with the following amended paragraph:

Note that the shape and the form of the drive roller and the frictional connection unit that ~~construct~~ ~~form~~ the high speed discharging roller pair ~~is-are~~ ~~not~~ limited ~~in-to~~ the above embodiment. For another embodiment, see FIGs. 9 and 10. In FIGs. 9, 10 the same members and parts ~~has-have~~ the same numerals as the above embodiment, and the explanations thereof are omitted. In a frictional connection unit 128 illustrated in FIG. 9, a tip 129a of the friction member or pad 129 has a taper surface 129b. The taper surface 129b is formed to have a constant inclination to an axis of the drive roller 130. Further, one side 130a of the drive roller 130 has a recess 130b so as to accept the top of the tapered portion of the friction member 129. The diameter of the recess 130b is smaller than the outer diameter of the taper surface 129b. As the frictional connection unit 128 and the drive roller 130 have such structure, the friction member 129 biased by the coil spring 75 presses the outer edge of the recess 130b. Accordingly, the friction member 129 and the drive roller 130 are more effectively ~~combined-coupled~~ with the friction by the larger pressure. When the larger load of the rotation is applied, the slip occurs between the friction member 129 and the drive roller 130. The embodiment of FIG. 9 is adequate for the case when the specifically large load of the rotation is applied.

Please replace the paragraph bridging pages 24 and 25 with the following amended paragraph:

In the above embodiment, the photosensitive material drawn from the magazine is cut by the cutter 7 to have a predetermined size. The position of the cutter 7 may be upstream from the sheet dispenser 10, and is not restricted in the above embodiment. Further, the cutting direction of the cutter 7 is a widthwise direction of the photosensitive material, and the print size of the cut sheet depends on the length of convey before cutting. Further, in the above embodiment, the width of the print size in the widthwise direction is changed by selecting one of the plural photosensitive material-materials which have different width-widths. However, a slitter may be provided so as to cut the photosensitive material in the conveying direction, and to change the width of the cut recording material. The number of the used magazine-magazines is not restricted in-to two, but may be equal to or more than three.